

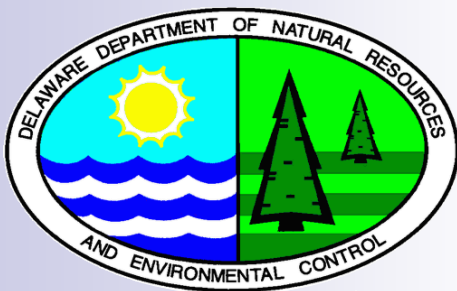


Public Hearing

June 27, 2013

Emission Standards for Chromium Electroplating and Anodizing Tanks

Section 6 of
7 DE Admin. Code 1138



Blue Skies Delaware; Clean Air for Life

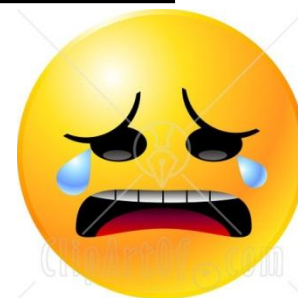
Department's Presentation

- Introduce the public hearing **handouts**
- Provide **brief background** information on
 - EPA's **initial “MACT”** standard in 1995 (40 CFR Part 63 Subpart N)
 - Department's adoption of a comparable regulation in 1999 (Reg. 1138 Section 6)
 - EPA's **2012 “RTR”** revisions to Sub N **to protect public health with an ample margin of safety**
 - Department's current activities to amend Section 6 in light of the EPA's “RTR” revisions



1973 to 1990 Air Toxics Standards

- **Seven** HAPs identified
- **21** Air toxics standards promulgated



	'73 – '80	'81 – '85	'86 – '90	'91 – '92
Arsenic			3	
Asbestos		1		
Benzene		1	4	
Beryllium	2			
Mercury	1			
Radionuclides			7	1
Vinyl chloride	1			



That Changed in 1990

- **Congress** enacts amendments to the **Clean Air Act** that **significant changed** how the EPA would develop and promulgate **air toxics** emission standards



Clean Air Act Amendments of 1990

- **Congress** identified 189
Hazardous Air Pollutants
or HAPs



- Including CHROMIUM Compounds



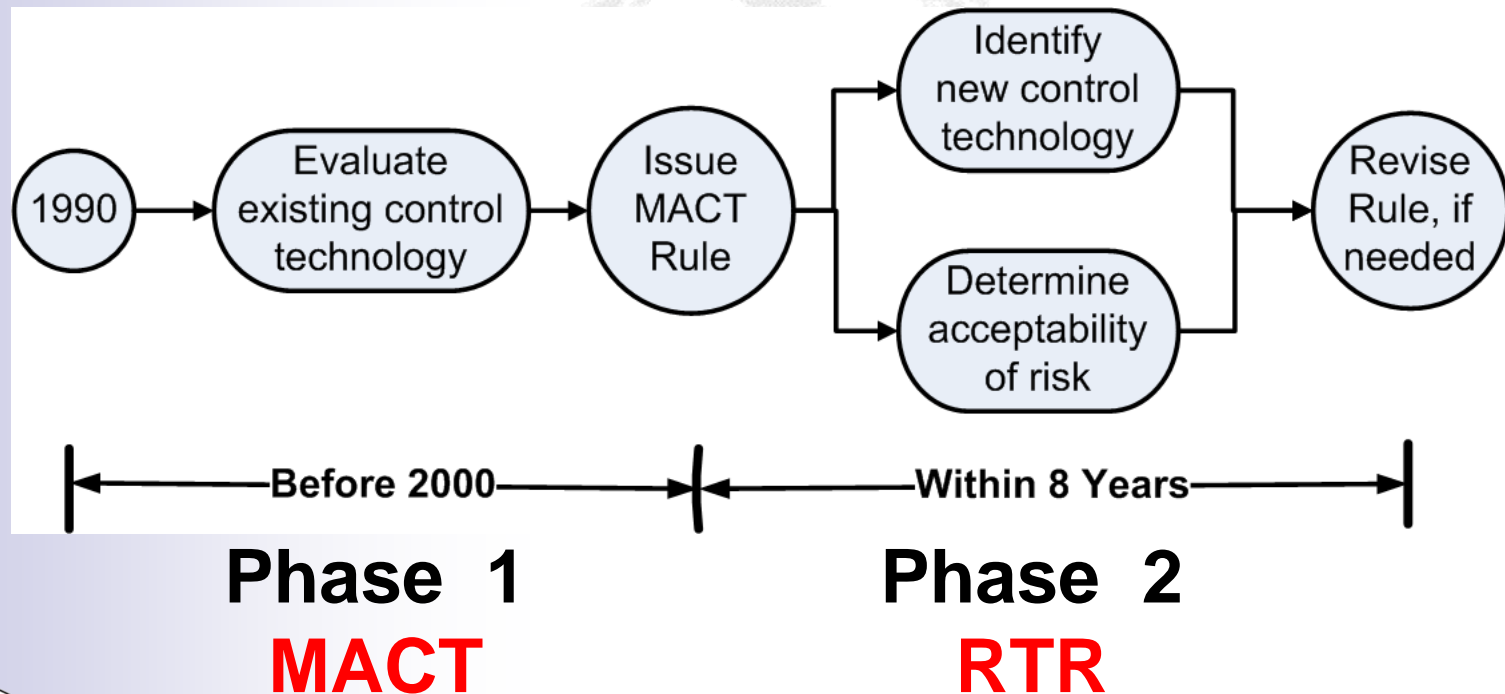
Clean Air Act Amendments of 1990

- **Congress** directed the EPA to identify emission sources of those 189 HAPs
- **July 16, 1992** - EPA published its initial listing of emission sources or source categories; the initial listing included . . .
 - **Chromium** electroplating operations
 - **Chromium** anodizing operations



Clean Air Act Amendments of 1990

- **Congress** even prescribed EPA's rule-making "path forward" – A 2-Phase Process



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Federal Chromium Electroplating Rule

PHASE 1 - 40 CFR Part 63 Subpart N

- On **January 25, 1995**, EPA issued its **MACT** standard under 40 CFR Part 63 Subpart N (Sub N) applicable to . . .

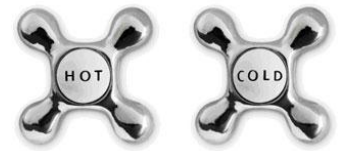


- Chromium **Electroplating** Operations
- Chromium **Anodizing** Operations



Sub N - Affected Facilities

- **Hexavalent** Chromium Electroplating operations
 - Large hard Cr⁺⁶ electroplating
 - Small hard Cr⁺⁶ electroplating
 - Decorative Cr⁺⁶ electroplating
- **Trivalent** Chromium Electroplating operations
 - Decorative Cr⁺³ electroplating
- **Hexavalent** Chromium Anodizing operations
 - Cr⁺⁶ anodizing



Sub N – Emission Limitations

- MACT standard established **chromium** emission limitations for **existing** and **new** sources

	MACT Limitation (mg/dscm)			
	Existing	New		
Small Hard Cr ⁺⁶ Plating w/ S/U ≤ 12/16/93	0.030	0.015		
Small Hard Cr ⁺⁶ Plating w/ S/U > 12/16/93	0.015	0.015		
Large Hard Cr ⁺⁶ Plating	0.015	0.015		
Decorative Cr ⁺⁶ Plating	0.010	0.010		
Cr ⁺⁶ Anodizing	0.010	0.010		
Decorative Cr ⁺³ Plating	Use Fume Suppressant			



Chromium – Carcinogenic Effects

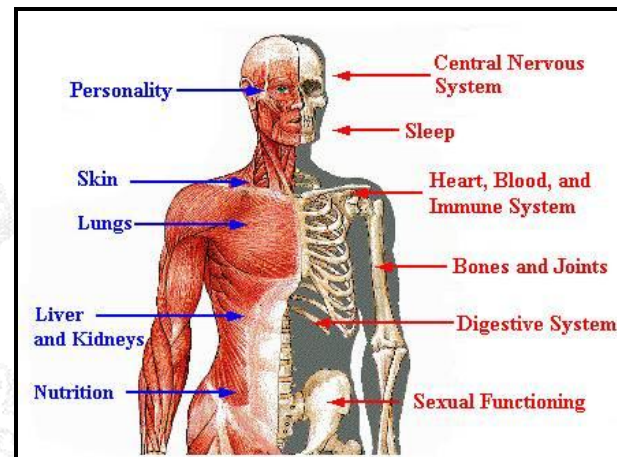
Cr⁺⁶ (hexavalent) compounds

- EPA classified **known human carcinogen** (Group A)
- **Respiratory** system – Primary Target



Chromium – Non-carcinogenic Effects

- Renal System – Cr^{+6}
- Respiratory System – Cr^{+3} and Cr^{+6}
- Liver – Cr^{+6}
- Gastrointestinal System – Cr^{+6}



Sub N – Other Facility Requirements

- **Control Technology Requirements**
 - Preapproved **Capture & Control Systems**
 - **Initial** Performance Testing
 - **Ongoing** Monitoring Requirements
- **Operating & Maintenance Requirements**
- **Notification & Reporting Requirements**
- **Recordkeeping Requirements**



Composite
Mesh Pad



Delaware's Adoption of MACT Standard

- On **June 8 & 10, 1999**, DNREC conducted TWO **public workshops** for the Department's planned adoption of Federal **Sub N** as **Section 6** of Reg. 1138
- On **July 26 & 27, 1999**, DNREC held TWO **public hearings** on the proposed Section 6
- On **Sept. 11, 1999**, Section 6 became **Final and Effective**



Well Time Passes



Ticket prices are up

Disneyland's 1-Day 1-Park admission price increase starts Thursday.

\$92
2013



Federal Chromium Electroplating Rule

PHASE 2 - 40 CFR Part 63 Subpart N

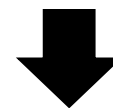
Jan. 25, 1995

MACT
Rule
Finalized



Sept 19, 2012

Sub N
Revision
Finalized

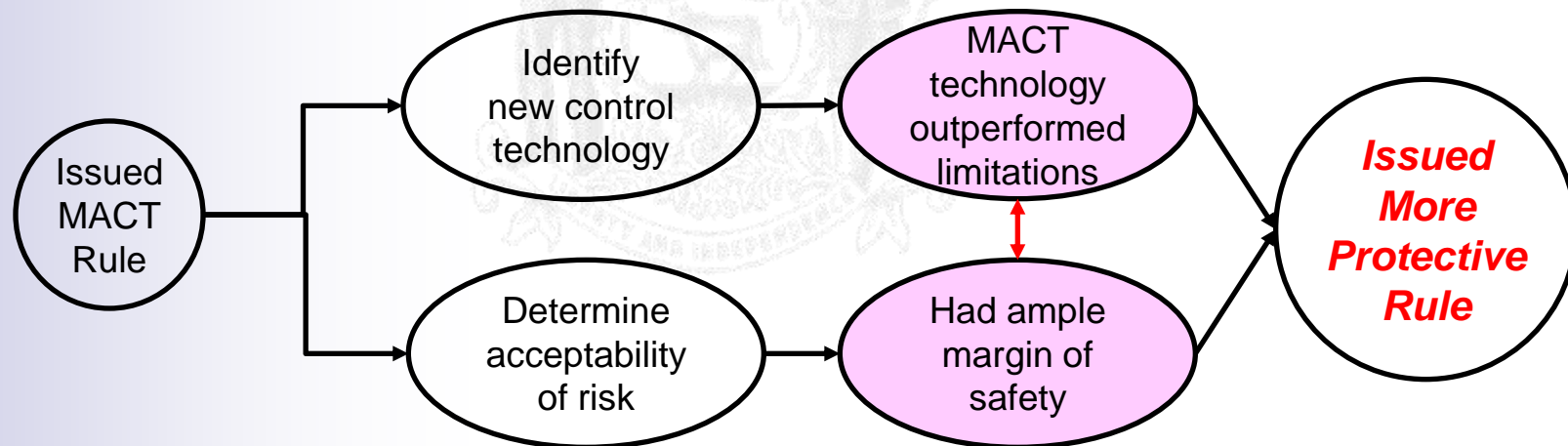
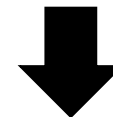


Risk & Technology
Reviews (**RTR**) Completed

Oct. 21,
2010



Feb. 8,
2012

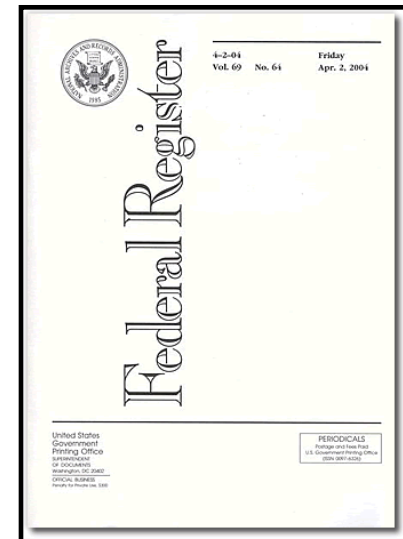


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EPA's Area Source Air Toxics Program

- On **September 19, 2012**, EPA had concluded their risk and technology reviews (RTR) and finalized new requirements into Sub N that . . .

“provides for an **ample margin of safety** to protect public health.”



Sub N – RTR Emission Limitations

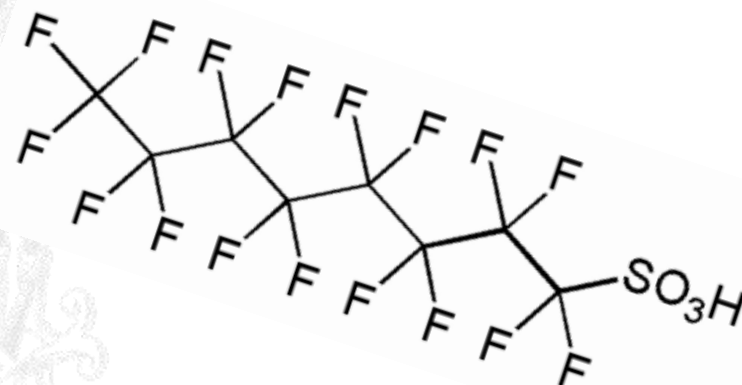
- **RTR vs. MACT** standard established **chromium** emission limitations for **existing** and **new** sources

	RTR Limitation (mg/dscm)		MACT Limitation (mg/dscm)	
	Existing	New	Existing	New
Small Hard Cr⁺⁶ Plating w/ S/U ≤ 12/16/93	0.015	- - -	0.030	0.015
Small Hard Cr⁺⁶ Plating w/ S/U > 12/16/93	0.011	0.006	0.015	0.015
Large Hard Cr⁺⁶ Plating	0.011	0.006	0.015	0.015
Decorative Cr⁺⁶ Plating	0.007	0.006	0.010	0.010
Cr⁺⁶ Anodizing	0.007	0.006	0.010	0.010
Decorative Cr⁺³ Plating	Use Fume Suppressant		Use Fume Suppressant	



Banned PFOS-based fume suppressants

- Prohibit the addition of PFOS-based fume suppressant to tank baths \geq Sept. 21, 2015
- Affected fume suppressants contain $\geq 1\%$ PFOS by weight
- EPA reported PFOS as
 - Persistent
 - Bio-accumulative
 - Toxic characteristics



PFOS – Perfluorooctane sulfonic acid



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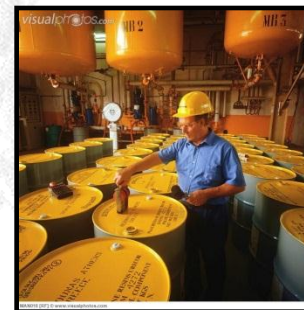
Sub N – Housekeeping Procedures

- Added 7 housekeeping procedures to reduce the potential **fugitive** for chromium emissions



The 7 New Housekeeping Procedures (Table 6-2)

1. Store and transport all substances that contain hexavalent chromium in closed containers.
2. Minimize the dripping and drainage of bath solution that results from drag out.
3. Minimize overspray and capture/return liquids from spray operation for removing excess bath solution from parts.



Sub N – Deleted Malfunction Exemption

- *Sierra Club v. EPA*, (DC Circuit, 2008)
 - **Eliminated MACT exemption** of complying with emission limitation during malfunction of either the . . .
 - Emission control equipment
 - Process equipment
 - Monitoring equipment
 - **BUT**



Sub N – Deleted Malfunction Exemption

- EPA recognized that **malfunctions are unpredictable**, so EPA **provided** normally well-operated affected sources
 - The **opportunity** to assert an “affirmative defense” to a claim for civil penalties
 - The **process** to fully demonstrate the malfunction was unpredictable and all steps were taken to minimize emissions



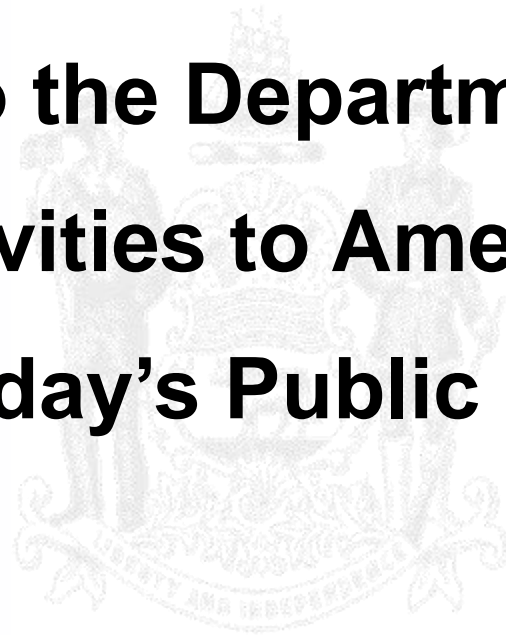
Sub N – Other Miscellaneous Changes

- New compliance dates
- Required performance testing for new emission limitations
- Revised recordkeeping and reporting requirements
- Other miscellaneous revisions and technical corrections
- All of which were covered during the two public workshops





Which Brings Us to the Department's Current Activities to Amend Section 6 And Today's Public Hearing



DNREC's Proposed Amendment to Section 10

- On **December 4, 2012**, the **Secretary approved** the Department's request to amend Section 6 consistent with the federal **RTR** changes to Subpart N
- On **April 23 and May 1, 2013**, the Department presented the proposed revisions to Section 6 at **public workshops conducted** in Georgetown and New Castle
- On **June 1, 2013**, the proposed amendment to **Section 6 appeared** in the Delaware Register of Regulations



Proposed Revisions to Section 6

- Includes the federal RTR changes that EPA finalized on September 19, 2012, with one significant exception
 - As finalized, federal Sub N **exempted existing sources** from complying with Sub N for the **two year period** of September 19, 2012 through September 19, 2014
 - Proposed Section 6 requires existing sources **to continue to comply** with the current MACT requirements until the **RTR** requirements “kick-in” on September 19, 2014



Proposed Revisions to Section 6

Plus “cosmetic” changes

- To **improve** consistency of terminology
Ex. - relevant emission limitation,
- To **conform** with the DE Register’s formatting
Ex. - component must-shall be identified
- To **correct** prior technical errors
Ex. - 50 to 100 grams per liter (g/L)-(g/l)



Technical Corrections to Proposed Section 6

- 20 revisions submitted to the Register on May 14, 2013 were not incorporated in the June 1 Register
- One capitalization error (previously overlooked) was found during review and should be corrected.

Technical Corrections to Proposed Amendment of Section 6,

As it Appeared in the June 1, 2013 Delaware Register of Regulations

The following changes to Section 6 (shown below in bold text) were included in the Department's submittal of the proposed amendment to Section 6 on May 14, 2013 to the Delaware Registrar for its inclusion in the June 1, 2013 Register of Regulation. However, the changes below, **all non-substantive**, did not appear in the published proposed amendment.

6.3.2.2.3 The emission limitation calculated according to 6.5.5.4 of this regulation if affected sources are performing different types of operations[,] or **if** affected sources are performing the same operations but subject to different emission limitations[,] and are controlled with an add-on air pollution control device that may also be controlling emissions from nonaffected sources.

6.4.3.2.2 On and after the date on which the initial performance test is required to be completed under 2.7-3.7 of this regulation, the owner or operator of



Revisions to Proposed Section 6

- DNREC informed the known chromium electroplating and anodizing facilities of the Department plan to correct these oversights on June 10
- DNREC updated the regulatory webpage in a manner that would clearly point out the revision of proposed Section 10

Title 1 Department of Natural Resources and
Environmental Control
1138 Emission Standards for Hazardous Air
Pollutants for Source Categories

9/11/13

6.0 Emission Standards for Chromium
Emissions from Hard and Decorative Chromium
Electroplating and Chromium Anodizing Tanks

6.1 Applicability and designation of sources.

6.1.1 The affected source to which the provisions
of 6.0 of this regulation apply is each chromium
electroplating or chromium anodizing tank at
facilities performing hard chromium electroplating,
decorative chromium electroplating, or chromium
anodizing.

6.1.2 Owners or operators of affected sources
subject to the provisions of Section 6.0 of this
regulation ~~must~~ shall also comply with the
requirements of 3.0 of this regulation, according to
the applicability of 3.0 of this regulation to such
sources, as identified in Table 6-2 ~~6-3~~ of this
regulation.





Regulatory Requirements For Public Notices and Participation Met



Section 6 Public Notifications

- Email communications during development of draft and proposed language
- Public workshop and public hearing notices in
 - The Delaware State News and News Journal
 - Delaware Register of Regulations
 - State Calendar of Public Meetings
 - DNREC Public Notices Website
 - E-News Updates from Delaware's Office of Environmental Protection
 - DAQ's Section 6 regulatory web page



Other information

- A listing of **existing facilities** that may become affected sources
- The Department's determination that the potentially affected sources **do not qualify** for additional consideration for less stringent requirements under the Regulatory Flexibility Act
- Revision to the previously developed **compliance assistance tool** reflecting EPA's revised submittal date



For the latest information,
follow the ongoing development on
Section 6 Regulatory Web Page

<http://www.dnrec.delaware.gov/Air/Pages/Section6RTR.aspx>

